Abstract

The present invention discloses compounds of formula (1) any of its enantiomers or any mixture thereof, or a pharmaceutically acceptable salt thereof; wherein _ _ _ _ is a single or a double bond; R is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl or aralkyl; and R^1 is (a), wherein R^2 is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, amino; or aryl which may be substituted one or more times with substituents selected from the group consisting of alkyl, cycloalkyl, cycloalkylalkyl alkenyl, alkynyl, alkoxy, cycloalkoxy, thioalkoxy, thiocycloalkoxy, methylenedioxy, aryloxy, halogen, CF_3, OCF_3, CN, amino, aminoacyl, nitro, aryl and a monocyclic 5 to 6–membered heteroaryl group; a monocyclic 5 to 6–membered heteroaryl group which may be substituted one or more times with substituents selected from the group consisting of alkyl, cycloalkyl, cycloalkylalkyl alkenyl, alkynyl, alkoxy, cycloalkoxy, thioalkoxy, thiocycloalkoxy, methylenedioxy, aryloxy, halogen, CF_3, OCF_3, CN, amino, nitro, aryl and a monocyclic 5 to 6–membered heteroaryl group; or a bicyclic heteroaryl group composed of a monocyclic 5 to 6 membered heteroaryl group fused to a benzene ring or fused to another monocyclic 5 to 6–membered heteroaryl, all of which may be substituted one or more times with substituents selected from the group consisting of alkyl, cycloalkyl, cycloalkylalkyl alkenyl, alkynyl, alkoxy, cycloalkoxy, thioalkoxy, thiocycloalkoxy methylenedioxy, aryloxy, halogen, CF_3, OCF_3, CN, amino, nitro, aryl and a monocyclic 5 to 6–membered heteroaryl group. The compounds of the invention are useful as nicotinic ACh receptor ligands.